UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

November 15, 2001

Richard Weissenborn
BRAC Operations, Code 06CA.RW/0889
Department of the Navy, Southwest Division
Naval Facilities Engineering Command
1230 Columbia Street, Suite 1100
San Diego, CA 92101

RE: **Draft Focused Remedial Investigation Work Plan, Ordnance and Explosives Waste Characterization, Time-Critical Removal Action and Geotechnical and Seismic Evaluations at Installation Restoration Site 2 Alameda Point, Alameda**

Dear Mr. Weissenborn:

EPA's contractor, Tech Law Inc. has provided the review for EPA of the above referenced document, prepared by Foster Wheeler Inc. and submitted by the Navy on August 29, 2001. EPA requested a two week extension on the 60 day review, moving the comment due date to November 15, 2001. Enclosed with this letter is Tech Law's review of the draft document.

The investigative work at Site 2 has some similarities to the OEW work proposed for Site 1. However, the presence of wetlands and extensive ecological habitat at Site 2 make the investigation much more complex. There are a few significant problems with the workplan resulting from not adequately factoring in the restrictions on the investigation imposed by the presence of the wetlands The extent of the ponds is not shown or discussed and procedures for conducting the OEW characterization and removal in areas that are under water are not presented. It is not clear that the Environmental Protection Plan fulfills the substantive requirements of appropriate ARARs. In addition, UXO procedures are not provided for all activities, and are inadequate for protection of workers conducting the soil borings.

Please call me at (415) 972-3029 so that we can resolve these outstanding issues prior to the draft final submittal.

Sincerely,

Anna-Marie Cook

Anna-Marie Cook
Remedial Project Manager

cc list: Michael McClelland, BEC SWDiv
Andrew Dick, SWDiv
Daniel Murphy, DTSC
Dennis Mishek, RWQCB
Elizabeth Johnson, City of Alameda
Dana Kokubun, Golden Gate Audubon Society
Michael John Torrey, RAB Co-Chair
Karla Brasaemle, Tech Law Inc.

Review of the Draft ~~Final~~ Focused Remedial Investigation Work Plan, Ordnance and Explosives Characterization, Time-Critical Removal Action and Geotechnical and Seismic Evaluations at Installation Restoration Site 2, Alameda Point, California

GENERAL COMMENTS

1. In a number of sections found throughout the document, a specific area shown on Figure 4-1 is referred to as a "Possible EOD Range". It is unclear as to whether the area is actually suspected to be a range used by military Explosive Ordnance Disposal (EOD) units for training (an EOD Range), or simply a potential site where ordnance was disposed by burial at one or more times, or whether the area is suspected of having been used for the destruction of ammunition as described in Section C.5.5.4 of DoD 6055.9-STD (DoD Ammunition and Explosives Safety Standards, July 1999). If the area is truly suspected of having been an EOD Range, the reasoning behind this should be included in the work plan. If it is only suspected of being a location where munitions of unknown types and quantities were buried, the documentation provided in the Unexploded Ordnance Site Investigation Final Summary Report , Operable Unit (OU) #3, dated October 22, 1999, provides sufficient justification for that determination, and the "Possible EOD Range" title should be removed. If, however, it is suspected of being a location where munitions were destroyed by detonation, the basis for this determination should be provided in detail and the potential for unexploded ordnance "kickouts" from the detonations must be assumed until proven otherwise. Also, the area should be redesignated as a Demolition Area (or an Open Burn/Open Detonation Area if both functions were performed there). Please expand the discussion of the "Possible EOD Range" in the document to include the reasoning behind this designation and provide details of the operations suspected to have occurred in the area. If the area is not actually suspected as having been used as an EOD Range, please redesignate the area according to its presumed use.

2. Based on the information provided in the Report, the proposed investigation and action do not appear to comply with the substantive portions of the Clean Water Act (CWA) Section 404. The Report should provide documentation that the Navy has coordinated with the appropriate regulatory agencies (e.g., US Army Corps of Engineers). According to page 3-35 of the CERCLA *Guidance with Other Laws Manual* (dated August 8, 1988), "if the CERCLA action has the potential to affect wetlands...the RPMs should consult with other agencies [including] the Army Corps of Engineers". The proposed action involves significantly altering the vegetation of wetland areas, and it appears that the possible EOD range (as depicted in Figure 4-2), which will be excavated to one foot below grade, occurs within the borders of a wetland. Since the proposed investigation and action involve alteration of a wetland, the ARARs section is incomplete.

It is not clear that the proposed action has been evaluated to minimize impact and avoid unnecessary stress on the ecosystem. For example, 40 CFR Part 230 Subpart H, "Actions to Minimize Adverse Effect" should be addressed. In order to satisfy this aspect, the report should provide a discussion of the current function of the wetland, and a description of any planned post-removal restoration activities, including success criteria for those restoration activities.

The proposed action should be conducted in a manner conducive to the overall preservation of the wetland function. Specific information and evaluation requirements specified in Section 404 should be included in order to document that the substantive requirements of the CWA have been met.

3. Based on the ecological risk assessment, the two ponds occupy a significant portion of the site, and it is unclear how the ordnance and explosives waste (OEW) sweep will be conducted in grid squares that are partially or completely under water. It is also unclear whether the wetlands are seasonally wet, or wet during high tides; it is possible that it may not be possible to excavate test pits or complete soil borings in saturated areas. Please present the extent of the ponds on Figure 4-2 and discuss how the OEW sweep will be conducted in grid squares that are partially or completely under water. Also, please discuss whether it will be possible to get heavy equipment into the wetlands to dig test pits and complete soil borings.

SPECIFIC COMMENTS

1. **Section 1.1.8, OEW Investigation, Page 1-4, Section 4.3, OEW Investigation, Page 4-8, and Section 4.5 OEW Removal Action, Page 4-11:** The next-to-the-last sentence in Section 1.1.8 on page 1-4 states that "UXO avoidance procedures will be followed" while the topsoil is being removed from the "Possible EOD Range," but no description of these procedures or reference to where they may be found is provided in the section. A requirement for UXO avoidance procedures is also stated with reference to the vegetation removal operation in the first paragraph of Section 4.3, OEW Investigation. However there is no discussion of what constitutes these UXO avoidance procedures. The same omission occurs in Section 4.5, OEW Removal Action. Sections on UXO avoidance procedures for the borehole drilling and for the Test Pit Excavations are presented (sections 4.6.2 and 4.6.5, respectively), but no specific UXO avoidance procedures for the vegetation removal, or for the removal of the topsoil from the "Possible EOD Range," are listed. Please revise Sections1.1.8, 4.3 and 4.5 to include the appropriate UXO avoidance procedures for the vegetation cutting and topsoil removal operations, or reference where they may be found elsewhere in this document or other documents, as appropriate.

2. **Table 1-1, Data Quality Objectives for Geotechnical Concerns:** It is unclear if the historic document review has been completed. Text in Step 3 states that the review has been completed, but the phrase "will determine" in Step 5 text implies that it has not been

done. Please clarify whether this work has been done. Also, UC Berkeley did some acoustic imaging profiling of waters and sediments in this area, but this work is not referenced.

3. **Table 1-1, Data Quality Objectives for Geotechnical Concerns:** Step 3 should specify data to be used and collected rather than general and qualitative information objectives. Please include specific data to be used to make decisions in Step 3.

4. **Table 1-1, Data Quality Objectives for Geotechnical Concerns:** Step 5 decision rules do not include any criteria for decisions. Please include specific criteria and data for the decisions to be made and restate the decision rules in an if...then format.

5. **Table 1-1, Data Quality Objectives for Geotechnical Concerns:** In Step 7, please discuss sampling design issues. For example, please specify how the transects will be selected for slope stability analysis. Also, please move the last item to Step 3 (Input to the Decisions) because specifying the tests to be done is more appropriate as an Input to the Decision. Please discuss design issues relating to the Standard Penetration Test (SPT) and geotechnical testing in Step 7. For example, please specify criteria for selecting depths or units for collecting geotechnical samples.

6. **Table 1-2, Data Quality Objectives for Ordnance and Explosives Concerns:** There are no quantitative criteria in this table. The "Input to Decisions" includes three reports, and does not include the data to be collected. Please include the surface sweep that will be conducted as one of the elements in Step 3: Input to the Decisions.

7. **Table 1-2, Data Quality Objectives for Ordnance and Explosives Concerns:** In Step 2, the last three decisions are not specifically addressed in the subsequent steps. These are major decisions. Please address each decision in each of the subsequent steps.

8. **Table 1-2, Data Quality Objectives for Ordnance and Explosives Concerns:** The first item in Step 5 is not a decision rule. This statement "Records indicate that OEW was buried in the landfill" should be part of the Statement of Problem in Step 1. Please move this item to Step 1.

9. **Table 1-2, Data Quality Objectives for Ordnance and Explosives Concerns:** The second item in Step 5 appears to be an answer to the Step 2 question "What is the Most Probable Munition (MPM)?" If the MPM is known, then determining it is not part of the study and the question in Step 2 should be deleted, then the statement in Step 5 should be moved to Step 1. Alternatively, the MPM should be determined by cataloging and counting ordnance items found during the survey and removal action. Please reevaluate the DQO statements and questions relating to MPM and revise, move or delete them as necessary.

10. **Table 1-2, Data Quality Objectives for Ordnance and Explosives Concerns:** The statements in Step 5 are not decision rules. Please rewrite these statements as decision rules be reformatting them into an "if...then" format.

11. **Table 1-2, Data Quality Objectives for Ordnance and Explosives Concerns:** Step 6 states that decision errors will not be established except in the case that ordnance and explosives waste (OEW) is encountered. Decision errors could include a percentage of items that must be detected, and would be verified by a different team conducting a second sweep of some grid areas (similar to the criteria established in Section 6.5 of Appendix A). Please discuss how and when decision errors will be established if OEW is encountered, given that no quantitative decision rules are listed in Step 5.

12. **Table 1-2, Data Quality Objectives for Ordnance and Explosives Concerns:** There does not appear to be a method to determine the most probable munition (MPM), it appears that it is assumed that the MPM will be 20 mm. Step 7 does not state that OEW will be counted and logged. Please consider counting and logging OEW so that the MPM can be determined.

13. **Section 2.0, Description and Construction History, Page 2-1:** The Explosive Ordnance Disposal (EOD) Range is not shown on Figure 2-1. Please include the location of the EOD Range on Figure 2-1.

14. **Section 2.2.1.3, Geophysical Survey, Page 2-4:** This section refers to the "Possible EOD Range" without explaining why the area is suspected to have been used for that purpose. It does indicate, however, that the area was identified as a possible ordnance burial site. Please expand this section to explain the reasoning behind designating what is described as a munitions burial site as a "Suspected EOD Range."

15. **Table 3-1, List of Contacts Involved in the Project:** Please include the Alameda Police and Fire Departments in this table. Also, Brad Job has left the Regional Water Quality Control Board; please note this in the table.

16. **Section 4.1.4, Operating Procedures, Page 4-3:** The next-to-the-last sentence in this section on page 4-3 reads as follows: "The Alameda Hazardous Material Response Team (510-522-2423) or military EOD (707-424-5517) unit will be notified Army Technical Escort, as appropriate." It is unclear what the "Army Technical Escort" will do or what the criteria are for suspecting that chemical warfare agents are present. Please clarify the criteria for evaluating the potential presence of chemical warfare agents and specify the duties of the Army Technical Escort if chemical warfare agents are suspected.

17. **Section 4.2.1, Exclusion Zones, Page 4-3:** The exclusion zone for the OE Characterization work is stated to be 300 feet. Since the most probable munition (MPM) has been identified as the 20mm high explosive incendiary (HEI) projectile, the 320-foot

exclusion for that item, as listed in Table 13-2 of NAVSEA OP 5, "Ammunition and Explosives Ashore," 15 January 2001, would appear to apply, instead of the 300-foot distance prescribed in this plan. In addition, when actual UXO are discovered, this section of the plan increases the exclusion distance to the respective default distances of 1,250, 2,500, or 4000 feet, depending on the size of the UXO located. Since both DoD 6055.9-STD and OP 5 allow for a reduction of these distances to those in the previously referenced Table 13-2 (Table C5.T2 in DoD 6055.9-STD) for listed munitions, it would appear that these default distances may, at times, be excessive. Also, in the last sentence of this section, the exclusion zone process is presented for unsafe UXO requiring detonation in place (BIP), but none is provided for UXO that are safe to transport. Please expand the discussion of the exclusion zones to include the above listed changes and to include the exclusion distance determination process described in OP5 more fully. Also, please include the procedures to be used when UXO are discovered which are safe to transport.

18. **Section 4.6.2, UXO Avoidance Procedures for Borehole Drilling, Page 4-16:** The second bullet in this section indicates that the surface of the area will be cleared of metal and checked with the magnetometer to be sure no metal is detected. It then indicates that the hand auger will be used to bore down to two feet. At that point, the magnetometer probe will be inserted into the hole to check for metal. Reliable references (U.S. Army Corps of Engineers EM 1110-1-4009 and others) indicate that a magnetometer is normally capable of detecting a 20mm projectile at approximately 0.4 feet (5 inches) or less, and a time domain electromagnetic detector can only detect a 20mm projectile at a maximum depth of 0.7 feet (8.5 inches). This would mean that the auger would be boring through approximately 1.5 feet of soil with no assurance that an unexploded 20mm projectile is not in the soil being bored. Please revise the section to reduce the distance bored with the hand auger between downhole instrument checks to a distance where the MPM expected can be detected reliably with the instrument being used.

19. **Section 6.1, Introduction, Page 6-1:** The text states that the Environmental Protection Plan (EPP) is intended to comply with National Environmental Policy Act; however, it is not clear that the EPP fulfills the substantive requirements of the appropriate ARARs. Please revise the EPP to provide evidence that location-specific ARARs involved with alteration of a wetland (e.g., Clean Water Act) have been considered and the substantive requirements fulfilled.

20. **Section 6.2, Environmental Issues and Concerns, Pages 6-1 and 6-2:** The perennial ponds are not shown or labeled on any of the figures. Please include the perennial ponds on at least one figure and reference the figure in the text.

21. **Section 6.3, Potential Impacts of Characterization/Survey Operations, Page 6-2:** The text states that the proposed measures to minimize impact to endangered or threatened species are in Section 7.4, but Section 7.4 is titled "Waste Management Activities."

Please provide the correct citation.

22. **Section 6.4.1, Reasons for Mitigating Actions, Page 6-3:** The last sentence of this section states, "the planned actions have been discussed with the appropriate regulatory authorities". Please reference specific documentation showing that the Navy has coordinated with the appropriate stakeholders (i.e., US Army Corps of Engineers, US Fish and Wildlife Service).

23. **Section 6.5, Monitoring, Page 6-4:** With regard to the level of disturbance to wildlife and plants occurring during field work, the text states, "a determination that the chosen course of action is acceptable will be made in the field". This does not appear to be acceptable without a specific discussion of the criteria that will be used to determine whether an action is acceptable. The report should discuss the specific decision criteria or guidelines to illustrate how field personnel will determine whether a chosen course of action is acceptable (i.e., extent to which sensitive vegetation or wildlife is disturbed). Also, it is recommended that the field biologist overseeing field activities have site-specific knowledge and responsibility.

24. **Figure 4-2, IR Site 2 Exploration Area**: The figure does not provide sufficient detail regarding the location of wetland and upland vegetation, ponds, open water, culverts, and the levee and seawall. Please provide a figure depicting the hydrological features of IR Site 2.

25. **Appendix A, Contractor Quality Control Plan:** Appendix A does not include any quality control (QC) procedures for the bathymetric survey other than to specify the coordinate system and reference elevation to be used. There are no QC procedures for the SPT tests. Please include QC procedures for the bathymetric survey and SPT tests.